

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1 -31. (Canceled)

¹ ~~32~~. (Previously presented) A method of identifying a cellular gene necessary for viral growth in a cell and nonessential for cellular survival, comprising

- (a) transferring into a cell culture a vector encoding a selective marker gene lacking a functional promoter,
- (b) selecting cells expressing the marker gene,
- (c) infecting the cell culture with the virus, and
- (d) isolating from the surviving cells a cellular gene within which the marker gene is inserted, thereby identifying a gene necessary for viral growth in a cell and nonessential for cellular survival.

² ~~33~~. (Previously presented) A method of screening a compound for antiviral activity, comprising a) administering the compound to a cell containing a cellular gene that is necessary for viral growth in the cell, but not necessary for survival of the cell; b) detecting the level and/or activity of the gene product produced by the cellular gene, a decrease or elimination of the gene product and/or gene product activity indicating a compound with antiviral activity, wherein the cellular gene can be identified by the method comprising:

- a) transferring into a cell culture a vector encoding a selective marker gene lacking a functional promoter;
- b) selecting cells expressing the marker gene;
- c) infecting the cell culture with the virus, and
- d) isolating from the surviving cells a cellular gene within which the marker gene is inserted.

3 ~~34~~. (Previously presented) A method of screening a compound for antiviral activity, comprising administering the compound to a cell containing a cellular gene comprising the nucleic acid set forth in SEQ ID NO:75 or a cellular gene comprising a nucleic acid that hybridizes to the nucleic acid set forth as SEQ ID NO: 75 under stringent hybridization conditions of hybridization at 68°C in 6X SSC or 6X SSPE followed by washing at 68°C, and detecting the level and/or activity of the gene product produced, a decrease or elimination of the gene product and/or gene product activity indicating a compound with antiviral activity, wherein the cellular gene functionally encodes a gene product necessary for viral growth in the cell, but not necessary for survival of the cell.

4 ~~35~~. (Previously presented) A method of screening a compound for antiviral activity comprising:

a) administering the compound to a cell containing a cellular gene comprising the nucleic acid set forth in SEQ ID NO:75 or a cellular gene comprising a nucleic acid that hybridizes to the nucleic acid set forth as SEQ ID NO: 75 under stringent hybridization conditions of hybridization at 68°C in 6X SSC or 6X SSPE followed by washing at 68°C, and functionally encoding a gene product necessary viral growth in the cell but not necessary for survival of the cell;

b) contacting the cell with a virus;

c) detecting the level of viral infection;

d) associating the level of viral infection with the level of the gene product and/or gene product activity of the cellular gene of a), a decrease or elimination of viral infection associated with a decrease or elimination of the gene product and/or gene product activity of a cellular gene of a) indicating a compound with antiviral activity.

5 36. (Previously presented) A method of screening a compound for antiviral activity, comprising administering the compound to a cell containing a cellular gene comprising the nucleic acid set forth in SEQ ID NO:75, or a cellular gene comprising a nucleic acid that hybridizes to the nucleic acid set forth as SEQ ID NO: 75 under stringent hybridization conditions of hybridization at 68°C in 6X SSC or 6X SSPE followed by washing at 68°C, wherein the cellular gene can be identified by the method comprising:

- a) transferring into a cell culture a vector encoding a selective marker gene lacking a functional promoter;
- b) selecting cells expressing the marker gene;
- c) infecting the cell culture with the virus, and
- d) isolating from the surviving cells a cellular gene within which the marker gene is inserted.

and functionally encoding a gene product necessary for viral growth in the cell but not necessary for survival of the cell and detecting the level and/or activity of the gene product produced, a decrease or elimination of the gene product and/or gene product activity indicating a compound with antiviral activity.

6 37. (Previously presented) A method of making an antiviral compound, comprising:

- a) synthesizing a compound;
- b) administering the compound to a cell containing a cellular gene that is necessary for viral growth in the cell, but not necessary for survival of the cell, wherein the cellular gene is identified by the method comprising:
 - (i) transferring into a cell culture a vector encoding a selective marker gene lacking a functional promoter;
 - (ii) selecting cells expressing the marker gene;
 - (iii) infecting the cell culture with the virus, and
 - (iv) isolating from the surviving cells a cellular gene within which the marker gene is inserted; and

c) detecting the level and/or activity of the gene product produced by the cellular gene, a decrease or elimination of the gene product and/or gene product activity indicating that an antiviral compound was made.

7 ~~38~~. (Previously presented) The method of claim ⁶~~37~~, wherein the cell contains a cellular gene comprising the nucleic acid set forth in SEQ ID NO:75 or a cellular gene comprising a nucleic acid that hybridizes to the nucleic acid set forth as SEQ ID NO: 75 under stringent hybridization conditions of hybridization at 68°C in 6X SSC or 6X SSPE followed by washing at 68°C.

8 ~~39~~. (Previously presented) A method of making an antiviral compound, comprising:

- a) synthesizing a compound;
- b) administering the compound to a cell containing a cellular gene that is necessary for viral growth in the cell, but not necessary for survival of the cell, wherein the cellular gene is identified by the method comprising:
 - (i) transferring into a cell culture a vector encoding a selective marker gene lacking a functional promoter;
 - (ii) selecting cells expressing the marker gene;
 - (iii) infecting the cell culture with the virus, and
 - (iv) isolating from the surviving cells a cellular gene within which the marker gene is inserted,
- c) contacting the cell with a virus;
- d) detecting the level of viral infection; and
- e) associating the level of viral infection with the level of the gene product and/or gene product activity of the cellular gene of b), a decrease or elimination of viral infection associated with a decrease or elimination of the gene product and/or gene product activity of a cellular gene of b) indicating a compound with antiviral activity was made.

⁹~~40~~. (Previously presented) The method of claim ⁸~~39~~, wherein the cell contains a cellular gene comprising the nucleic acid set forth in SEQ ID NO:75 or a cellular gene comprising a nucleic acid that hybridizes to the nucleic acid set forth as SEQ ID NO: 75 under stringent hybridization conditions of hybridization at 68°C in 6X SSC or 6X SSPE followed by washing at 68°C.

- ¹⁰~~41~~. (Previously presented) A method of making an antiviral composition, comprising:
- a) administering a compound to a cell containing a cellular gene that is necessary for viral growth in the cell, but not necessary for survival of the cell, wherein the cellular gene is identified by the method comprising:
 - (i) transferring into a cell culture a vector encoding a selective marker gene lacking a functional promoter;
 - (ii) selecting cells expressing the marker gene;
 - (iii) infecting the cell culture with the virus, and
 - (iv) isolating from the surviving cells a cellular gene within which the marker gene is inserted;
 - b) detecting the level and/or activity of the gene product produced by the cellular gene, a decrease or elimination of the gene product and/or gene product activity indicating that the compound is an antiviral compound; and
 - c) placing the antiviral compound in a pharmaceutically acceptable carrier.

¹⁰~~42~~. (Previously presented) The method of claim ¹⁰~~41~~, wherein the cell contains a cellular gene comprising the nucleic acid set forth in SEQ ID NO:75 or a cellular gene comprising a nucleic acid that hybridizes to the nucleic acid set forth as SEQ ID NO: 75 under stringent hybridization conditions of hybridization at 68°C in 6X SSC or 6X SSPE followed by washing at 68°C.

- ¹² ~~43~~. (Previously presented) A method of making an antiviral composition, comprising:
- a) administering a compound to a cell containing a cellular gene that is necessary for viral growth in the cell, but not necessary for survival of the cell, wherein the cellular gene is identified by the method comprising:
 - (i) transferring into a cell culture a vector encoding a selective marker gene lacking a functional promoter;
 - (ii) selecting cells expressing the marker gene;
 - (iii) infecting the cell culture with the virus, and isolating from the surviving cells a cellular gene within which the marker gene is inserted;
 - b) contacting the cell with a virus;
 - c) detecting the level of viral infection;
 - d) associating the level of viral infection with the level of the gene product and/or gene product activity of the cellular gene of b), a decrease or elimination of viral infection associated with a decrease or elimination of the gene product and/or gene product activity of a cellular gene of b) indicating that the compound is an antiviral compound; and
 - e) placing the antiviral compound in a pharmaceutical composition.

- ¹³ ~~44~~. (Previously presented) The method of claim ¹² ~~43~~, wherein the cell contains a cellular gene comprising the nucleic acid set forth in SEQ ID NO:75 or a cellular gene comprising a nucleic acid that hybridizes to the nucleic acid set forth as SEQ ID NO: 75 under stringent hybridization conditions of hybridization at 68°C in 6X SSC or 6X SSPE followed by washing at 68°C.